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09/755,512	01/05/2001	Raymond Kloth	112025-0074C1	6783
24267	7590	06/26/2006	EXAMINER	
CESARI AND MCKENNA, LLP			NGUYEN, TOAN D	
88 BLACK FALCON AVENUE			ART UNIT	
BOSTON, MA 02210			PAPER NUMBER	
			2616	

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/755,512

Applicant(s)

KLOTH, RAYMOND

Examiner

Toan D. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-16 and 18-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-16 and 18-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/18/01.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Applicant is advised that should claims 1 and 9 be found allowable, claims 18 and 19, respectively will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 21-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 21, the limitation "a plurality of switches to derive a virtual area network (derived LAN) in response to one or more indicia of frame type designation" was claimed. No support for this feature could be found in the original specification.

Regarding claim 22, the limitation "deriving a virtual area network (derived LAN) in a plurality of switches" was claimed. No support for this feature could be found in the original specification.

Regarding claim 23, the limitation “means for deriving a virtual area network (derived LAN) in a plurality of switches” was claimed. No support for this feature could be found in the original specification.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-2, 5, 7, 9-11, 13-16, and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Crayford (US 6,269,098).

For claim 1, Crayford discloses method and apparatus for scaling number of virtual LANs in a switch using an indexing scheme, comprising:

receiving a frame (the received frame) at a port (figure 2, references 60 and 62, col. 5 lines 25-32) of said switch (figure 1, reference 12, col. 3 lines 43), said received frame containing one or more indicia of frame type designation (col. 7 lines 6-10 and col. 8 lines 16-17);

deriving a virtual local area network (derived VLAN) value in response to said one or more indicia of frame type designation (col. 6 lines 39-42 and col. 8 lines 16-62), said derived VLAN internal to said switch (col. 3 lines 32-33 and col. 6 lines 40-42);

accessing a forwarding data base (figure 5, reference 106, col. 7 lines 23-35) with said derived VLAN value to determine a destination address (col. 8 lines 32-62); and

forwarding, in response to said derived VLAN value, said received frame to an output port for transmission to the destination (col. 8 lines 32-62 and col. 9 lines 30-33).

For claim 2, Crayford discloses said forwarding step forwarding in response to said derived VLAN value and said destination (col. 8 lines 55-61).

For claim 5, Crayford discloses wherein said indicia of frame type designation further comprise a virtual local area network established in said computer network (col. 7 lines 6-10).

For claim 7, Crayford discloses wherein said indicia of frame type designation further comprises an index value associated with a port at which said received frame was received (col. 7 line 62).

For claim 9, Crayford discloses method and apparatus for scaling number of virtual LANs in a switch using an indexing scheme, comprising:

a port (figure 2, references 60 and 62, col. 5 lines 25-32) to receive a frame (the received frame), said received frame containing one or more indicia of frame type designation (col. 7 lines 6-10 and col. 8 lines 16-17);

a parsing engine (figure 4, reference IRC 68, col. 7 lines 10-13) to derive a virtual local area network (derived VLAN) value in response to said one or more indicia of frame type designation (col. 6 lines 39-42 and col. 8 lines 16-62), said derived VLAN internal to said switch (col. 3 lines 32-33 and col. 6 lines 40-42);

a forwarding data base (figure 5, reference 106, col. 7 lines 23-35) having said derived VLAN value as input and a destination address as output (col. 8 lines 32-62);  
and

an output port to transmit said received frame, in response to said derived VLAN value, for transmission to said destination address (col. 8 lines 32-62 and col. 9 lines 30-33).

For claim 10, Crayford discloses a forwarding engine (figure 4, reference 68, col. 8 lines 8-9) for forwarding said received frame in response to said derived VLAN value and said destination address (col. 8 lines 55-61).

For claim 11, Crayford discloses method and apparatus for scaling number of virtual LANs in a switch using an indexing scheme, comprising:

receiving a frame (the received frame) at a port (figure 2, references 60 and 62, col. 5 lines 25-32) of said switch (figure 1, reference 12, col. 3 lines 43), said received frame containing one or more indicia of frame type designation (col. 7 lines 6-10 and col. 8 lines 16-17);

deriving a virtual local area network (derived VLAN) value in response to said one or more indicia of frame type designation (col. 6 lines 39-42 and col. 8 lines 16-62), said derived VLAN internal to said switch (col. 3 lines 32-33 and col. 6 lines 40-42);

accessing a forwarding data base (figure 5, reference 106, col. 7 lines 23-35) with said derived VLAN value to determine a destination address (col. 8 lines 32-62);  
and

forwarding, in response to said derived VLAN value, said received frame to an

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output port for transmission to the destination (col. 8 lines 32-62 and col. 9 lines 30-33).

For claim 13, Crayford discloses method and apparatus for scaling number of virtual LANs in a switch using an indexing scheme, comprising:

using one or more indicia of frame type designation found in a received frame a to derive a virtual local area network (derived VLAN) value (col. 7 lines 6-10, col. 6 lines 39-42 and col. 8 lines 16-62), said derived VLAN internal to said switch (col. 3 lines 32-33 and col. 6 lines 40-42);

using the derived VLAN value in making forwarding decisions (col. 8 lines 32-62 and col. 9 lines 30-33).

For claim 14, Crayford discloses controlling broadcast domains in the computer network by forwarding in response to the derived VLAN value (col. 6 lines 61-67 and col. 8 lines 32-62).

For claim 15, Crayford discloses using an indicia of a receiving port in constructing the derived VLAN value (col. 7 lines 6-10).

For claim 16, Crayford discloses method and apparatus for scaling number of virtual LANs in a switch using an indexing scheme, comprising:

using one or more indicia of frame type designation found in a received frame a to derive a virtual local area network (derived VLAN) value (col. 7 lines 6-10, col. 6 lines 39-42 and col. 8 lines 16-62), said derived VLAN internal to said switch (col. 3 lines 32-33 and col. 6 lines 40-42);

using the derived VLAN value in making forwarding decisions (col. 8 lines 32-62 and col. 9 lines 30-33).

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For claim 18, Crayford discloses method and apparatus for scaling number of virtual LANs in a switch using an indexing scheme, comprising:

receiving a frame (the received frame) at a port (figure 2, references 60 and 62, col. 5 lines 25-32) of said switch (figure 1, reference 12, col. 3 lines 43), said received frame containing one or more indicia of frame type designation (col. 7 lines 6-10 and col. 8 lines 16-17);

deriving a virtual local area network (derived VLAN) value in response to said one or more indicia of frame type designation (col. 6 lines 39-42 and col. 8 lines 16-62), said derived VLAN internal to said switch (col. 3 lines 32-33 and col. 6 lines 40-42);

accessing a forwarding data base (figure 5, reference 106, col. 7 lines 23-35) with said derived VLAN value to determine a destination address (col. 8 lines 32-62); and

forwarding, in response to said derived VLAN value, said received frame to an output port for transmission to the destination (col. 8 lines 32-62 and col. 9 lines 30-33).

For claim 19, Crayford discloses method and apparatus for scaling number of virtual LANs in a switch using an indexing scheme, comprising:

a port (figure 2, references 60 and 62, col. 5 lines 25-32) to receive a frame (the received frame), said received frame containing one or more indicia of frame type designation (col. 7 lines 6-10 and col. 8 lines 16-17);

a parsing engine (figure 4, reference IRC 68, col. 7 lines 10-13) to derive a virtual local area network (derived VLAN) value in response to said one or more indicia of frame type designation (col. 6 lines 39-42 and col. 8 lines 16-62);



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a forwarding data base (figure 5, reference 106, col. 7 lines 23-35) having said derived VLAN value as input and a destination address as output (col. 8 lines 32-62); and

an output port to transmit said received frame, in response to said derived VLAN value, for transmission to said destination address (col. 8 lines 32-62 and col. 9 lines 30-33).

For claim 20, Crayford discloses method and apparatus for scaling number of virtual LANs in a switch using an indexing scheme, comprising:

means for receiving a frame (the received frame) at a port (figure 2, references 60 and 62, col. 5 lines 25-32) of said switch (figure 1, reference 12, col. 3 lines 43), said received frame containing one or more indicia of frame type designation (col. 7 lines 6-10 and col. 8 lines 16-17);

means for deriving a virtual local area network (derived VLAN) value in response to said one or more indicia of frame type designation (col. 6 lines 39-42 and col. 8 lines 16-62), said derived VLAN internal to said switch (col. 3 lines 32-33 and col. 6 lines 40-42);

means for accessing a forwarding data base (figure 5, reference 106, col. 7 lines 23-35) with said derived VLAN value to determine a destination address (col. 8 lines 32-62); and

means for forwarding, in response to said derived VLAN value, said received frame to an output port for transmission to the destination (col. 8 lines 32-62 and col. 9 lines 30-33).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-4, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crayford (US 6,269,098) in view of Shani (US 6,023,563).

For claims 3-4, 6 and 8, Crayford does not expressly disclose wherein said indicia of frame type designation further comprise a protocol type. In an analogous art, Shani discloses wherein said indicia of frame type designation comprise a protocol type (Table 1, col.10 line 12). Shani further discloses wherein said indicia of frame type designation comprises a subnet value (Table 2a, col. 9 line 51 as set forth in claim 4); wherein said indicia of frame type designation comprises an IP source address (Table 1, col. 9 line 34 as set forth in claim 6); deriving a MAC address from said derived VLAN value and forwarding said received frame to a port for transmission to a destination having said MAC address (Table 1, col. 10 lines 10-12 as set forth in claim 8).

One skilled in the art would have recognized the protocol type, and would have applied Shani's database structure in Crayford's frame. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Shani's networking switch having the network presence of a bridge in Crayford's method and apparatus for scaling number of virtual LANs in a switch using an indexing scheme with the motivation being to provide a Main database structure (col. 10 lines 14-15).

***Response to Arguments***

8. Applicant's arguments filed 04/11/06 have been fully considered but they are not persuasive.

The applicant argues 1-2, 5, 7, 9-11, 13-16, that Crayford does not show Applicant's claimed novel deriving a virtual local area network (derived VLAN) value in response to said one or more indicia of frame type designation, said derived VLAN internal to said switch. The examiner disagrees. Applicant's attention is directed to Crayford at col. 6 lines 38-42 where Crayford clearly teach, "The present invention is directed to scaling the number of VLANs using an indexing scheme. A description will first be given of the IRC 68 (figure 2A, reference 68 is located internal to said switch 12) followed by the detailed description of the method and apparatus for scaling the number of VLANs in a switch (figure 2A, reference 12) using an indexing scheme." (deriving a virtual local area network (derived VLAN) value means, see specification on page 9 lines 22-24). Crayford teaches further at col. 8 lines 20-62, "The IRC 68 perform its logic functions for tagged and untagged ports differently. An exemplary network data packet is shown in FIG. 7A for untagged frame format, and FIG. 7B for tagged frame format." (in response to said one or more indicia of frame type designation means). Therefore, Crayford does teach the limitation "deriving a virtual local area network (derived VLAN) value in response to said one or more indicia of frame type designation, said derived VLAN internal to said switch" as recited in the claims.

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D. Nguyen whose telephone number is 571-272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

A handwritten signature in black ink, appearing to read 'Huy D. Vu', with a long horizontal line extending to the right.

**HUY D. VU**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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